

REMARKS/ARGUMENTS

The Office Action mailed August 30, 2006 has been carefully reviewed. Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested. Claims 1-22 originally appeared in the application. Claims 15-22 stand withdrawn. The claims presented for examination are: claims 1-14.

Restriction Requirement

An Election/Restrictions Requirement was summarized in numbered paragraphs 1-5 of the Office Action mailed August 30, 2006. The Examiner restricted prosecution of the above-captioned application to one of the inventions as grouped below. The Examiner supports the requirement for restriction under 35 USC §121.

Groups

- I. Claims 1-14, drawn to a stretchable electronic apparatus, classified in class 428, subclass 465.
- II. Claims 15-22, drawn to a method of producing a stretchable electronic apparatus, classified in class 29, subclass 846.

Response to Restrictions Requirement

Applicants elected, without traverse, the claims of group I, Claims 1-14, drawn to a stretchable electronic apparatus, classified in class 428, subclass 465 during a telephone conversation with the Examiner on August 22, 2006. Applicants confirm this election.

35 USC §102/103 Rejection

In numbered paragraph 6 of the Office Action mailed August 30, 2006, claims 1-14 were rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103a) as obvious over the Davidson et al reference (U.S. Patent No. 7,005,179).

Applicants submit that the invention claimed in claims 1-14 is not anticipated by or obvious over the Davidson et al reference.

The 35 U.S.C. §102 Rejection

The standard for a 35 U.S.C. §102-rejection is stated in RCA Corp. v. Applied Digital Systems, Inc, 221PQ 385, 388 (d. Cir. 1984) "Anticipation is established only when a single prior art reference discloses, either expressly or under principles of inherency, each and every element of a claimed invention." Applicant points out that the following elements of Applicants' claims 1-14 are not found in the Davidson et al reference:

"a multiplicity of stretching portions, each of said stretching portions having
a longitudinal component that extends in the longitudinal direction
and having
an offset component that is at an angle to the longitudinal direction,
said longitudinal component and said offset component allowing
said stretching portions to stretch in the longitudinal direction while
maintaining the integrity of said at least one circuit line," (Claim 1.),

"The stretchable electronic apparatus of claim 1 wherein said
longitudinal component that extends in the longitudinal direction
and said offset component that is at an angle to the longitudinal
direction comprise a 2-D serpentine circuit producing a spring in
said at least one circuit line," (Claim 2.)

"The stretchable electronic apparatus of claim 1 wherein said at least
one circuit line has a circuit line longitudinal axis that extends
generally parallel to the central longitudinal axis of the electronic
apparatus and wherein said longitudinal component that extends in
the longitudinal direction and said offset component that is at an

angle to the longitudinal direction extend laterally from said circuit line longitudinal axis," (Claim 3.)

"The stretchable electronic apparatus of claim 1 wherein said longitudinal component that extends in the longitudinal direction and said offset component that is at an angle to the longitudinal direction comprise a 3-D corduroy circuit producing stress relieves structures in said at least one circuit line," (Claim 4.)

"The stretchable electronic apparatus of claim 1 wherein said at least one circuit line has a circuit line longitudinal axis that extends generally parallel to the central longitudinal axis of the electronic apparatus and wherein said longitudinal component that extends in the longitudinal direction and said offset component that is at an angle to the longitudinal direction extend in a vertical direction above and below said circuit line longitudinal axis," (Claim 5.)

"The stretchable electronic apparatus of claim 1 wherein said at least one circuit line has a circuit line longitudinal axis that extends generally parallel to the central longitudinal axis of the electronic apparatus and wherein said longitudinal component that extends in the longitudinal direction and said offset component that is at an angle to the longitudinal direction extend both laterally from said circuit line longitudinal axis and vertically above and below said circuit line longitudinal axis," (Claim 13.)

"The stretchable electronic apparatus of claim 1 wherein said at least one circuit line has a circuit line longitudinal axis that extends generally parallel to the central longitudinal axis of the electronic apparatus, said circuit line having a first section with a longitudinal component that extends in the longitudinal direction and an offset component that is at an angle to the longitudinal direction and extends laterally from said circuit line longitudinal axis, and a second section with a longitudinal component that extends in the longitudinal direction and an offset component that is at an angle to the longitudinal direction and extends vertically above and below said circuit line longitudinal axis," (Claim 14.)

Since the elements described above are not found in the Davidson et al reference, the Davidson et al reference would not support a 35 U.S.C. §102 rejection.

The 35 U.S.C. §103 Rejection

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. §103(a) include "Ascertaining the differences between the prior art and the claims at issue." The differences between the Davidson et al reference and Applicants' invention include the fact that the following elements of the claims 1-14 are not found in the Davidson et al reference:

"a multiplicity of stretching portions, each of said stretching portions having
a longitudinal component that extends in the longitudinal direction
and having
an offset component that is at an angle to the longitudinal direction,
said longitudinal component and said offset component allowing
said stretching portions to stretch in the longitudinal direction while
maintaining the integrity of said at least one circuit line," (Claim 1.),

"The stretchable electronic apparatus of claim 1 wherein said
longitudinal component that extends in the longitudinal direction
and said offset component that is at an angle to the longitudinal
direction comprise a 2-D serpentine circuit producing a spring in
said at least one circuit line," (Claim 2.)

"The stretchable electronic apparatus of claim 1 wherein said at least
one circuit line has a circuit line longitudinal axis that extends
generally parallel to the central longitudinal axis of the electronic
apparatus and wherein said longitudinal component that extends in
the longitudinal direction and said offset component that is at an
angle to the longitudinal direction extend laterally from said circuit
line longitudinal axis," (Claim 3.)

"The stretchable electronic apparatus of claim 1 wherein said
longitudinal component that extends in the longitudinal direction
and said offset component that is at an angle to the longitudinal
direction comprise a 3-D corduroy circuit producing stress relieves
structures in said at least one circuit line," (Claim 4.)

“The stretchable electronic apparatus of claim 1 wherein said at least one circuit line has a circuit line longitudinal axis that extends generally parallel to the central longitudinal axis of the electronic apparatus and wherein said longitudinal component that extends in the longitudinal direction and said offset component that is at an angle to the longitudinal direction extend in a vertical direction above and below said circuit line longitudinal axis,” (Claim 5.)

“The stretchable electronic apparatus of claim 1 wherein said at least one circuit line has a circuit line longitudinal axis that extends generally parallel to the central longitudinal axis of the electronic apparatus and wherein said longitudinal component that extends in the longitudinal direction and said offset component that is at an angle to the longitudinal direction extend both laterally from said circuit line longitudinal axis and vertically above and below said circuit line longitudinal axis,” (Claim 13.)

“The stretchable electronic apparatus of claim 1 wherein said at least one circuit line has a circuit line longitudinal axis that extends generally parallel to the central longitudinal axis of the electronic apparatus, said circuit line having a first section with a longitudinal component that extends in the longitudinal direction and an offset component that is at an angle to the longitudinal direction and extends laterally from said circuit line longitudinal axis, and a second section with a longitudinal component that extends in the longitudinal direction and an offset component that is at an angle to the longitudinal direction and extends vertically above and below said circuit line longitudinal axis,” (Claim 14.)

Since the elements described above are not found in the Davidson et al reference, and there is not a showing or suggestion of Applicants’ claim elements, a 35 U.S.C. §103(a) rejection of Applicant’s claims 1-14 is not be appropriate and the rejection should be withdrawn.

NonObviousness of Applicants’ Invention – Reference Does Not Recognize Problem Solved by Invention

The Davidson et al reference does not recognize the problem solved by the invention of Applicants’ claims 1-14.

Paragraph [0014] of Applicants' application states, "The longitudinal portion and the offset portion allow the apparatus 100 to stretch in the longitudinal direction while maintaining the integrity of the circuit lines 102A and 102B."

The Davidson et al reference does not mention stretching of the circuit lines in the longitudinal direction or the problem of maintaining the integrity the circuit lines when they are stretched.

Since the Davidson et al reference does not recognize the problem solved by the invention of Applicants' claims 1-14, it would not be obvious to modify the Davidson et al reference to meet Applicants' claims 1-14. Applicants request that the rejection of Applicants' claims 1-14 be withdrawn.

NonObviousness of Applicants' Invention - Secondary Considerations

The invention of Applicants' claims has obtained commercial success and recognition by peers. An October 14, 2004 News Release by the Lawrence Livermore National Laboratory, titled "Livermore scientists join DOE consortium and private company to develop artificial retina," included the statements below. A copy of the Lawrence Livermore National Laboratory News Release is enclosed. A similar New Release by U. S. Department of Energy, titled "DOE Labs, Universities and Second Sight Partner to Speed Development of 'Artificial Retina' Restoring Sight through Science," also included the statements. A copy of the U. S. Department of Energy News Release is enclosed.

A Department of Energy (DOE) consortium of national laboratories including Lawrence Livermore National Laboratory and universities today signed an agreement with Second Sight Medical Products Inc. to jointly develop technology that could restore sight to those who have lost vision later in life. The Cooperative Research and Development Agreement (CRADA) allows Second Sight, of Sylmar,

Calif. to obtain a limited exclusive license for inventions developed during the DOE Retinal Prosthesis Project.

"The Department of Energy has led the way to many scientific breakthroughs, especially when several scientific disciplines combined to make a whole greater than the sum of the parts," Energy Secretary Spencer Abraham said. "This project is one such example where biology, physics and engineering have joined forces to deliver a capability that will enable blind people to see.

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Engineers from LLNL's Center for Micro- and Nanotechnology specifically are developing a flexible silicone implant (microelectrode array) that sits on the surface of the retina. The electrode array can contact delicate retinal tissue without damaging it.

The implantable retinal prosthesis is based on a system that converts a video camera signal into a stimulation pattern that is applied directly to the intra-ocular retinal surface. This is referred to as an epiretinal implant - the device is in contact with the surface of the retina. Visual signals are captured by a small video camera in the eyeglasses of the blind person and processed through a microcomputer worn on a belt.

Although the device will not restore full vision, it is expected to provide enough optical resolution for patients to read and recognize fine shapes.

LLNL's pioneering use of polydimethylsiloxane, or PDMS, allowed the microelectrode array to conform to the curved shape of the retina.

'PDMS has the look and feel of thin plastic food wrap,' said Livermore's principal investigator, Courtney Davidson. 'Yet it's biocompatible, making it a good candidate material for long-term implants.' "

The secondary considerations (1) that the Cooperative Research and Development Agreement (CRADA) allows Second Sight, of Sylmar, Calif. to obtain a limited exclusive license for inventions developed during the DOE Retinal Prosthesis Project, (2) that LLNL's pioneering use of polydimethylsiloxane, or PDMS, allowed the microelectrode array to conform to the curved shape of the retina, and (3) that Energy Secretary Spencer Abraham said "This project is one such example where biology, physics and engineering have joined forces to deliver a capability that will enable blind people to see," should be taken into

account in deciding the obviousness or nonobviousness of Applicants' claims. Applicants request that the rejections of Applicants' claims 1-14 be withdrawn.

Obviousness Type Double Patenting Rejection – Davidson et al

In numbered paragraph 7 of the Office Action mailed August 30, 2006, claims 1-14 were rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-7 of the Davidson et al reference (U. S. Patent No. 7,005,179).

Applicants have explained above that claims 1-14 unobvious and patentable over the Davidson et al reference. Those remarks and arguments will not be repeated here but are incorporated in this response to the rejection in numbered paragraph 7 of the Office Action mailed August 30, 2006.

Provisional Obviousness Type Double Patenting Rejection – Co-pending Applications Nos. 10/825,787, 10/115,676, and 11/228,759

In numbered paragraph 8 of the Office Action mailed August 30, 2006, claims 1-14 were provisionally rejected over claims 1-34; 1-8, 10, 14-17; and 11-14,17 of co-pending Applications Nos. 10/825,787, 10/115,676, and 11/228,759, respectively. It was stated, "A timely filed terminal disclaimer in compliance with 37CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application."

Co-pending Applications Nos. 10/825,787, 10/115,676, and the subject application are commonly owned. Application No. 11/228,759 **is not owned** by The Regents of the University of California. Co-pending Applications Nos. 10/825,787, 10/115,676 and the subject application are owned by The Regents of the University of California. Co-pending Applications Nos. 10/825,787,

10/115,676, and the subject application are owned by The Regents of the University of California as shown by a assignments recorded in the United States Patent and Trademark Office.

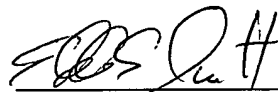
Enclosed herewith are terminal disclaimers in compliance with 37 CFR 1.321(c), disclaiming the terminal portion of any patent issuing from this application which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 to 156 and 173 of co-pending Application No. 10/825,787 or 10/115,676.

Applicants believe they have provided a full and complete response to the obviousness-type double patenting rejections in numbered paragraph 8 of the Office Action mailed August 30, 2006.

SUMMARY

The undersigned respectfully submits that, in view of the foregoing amendments and the foregoing remarks, the rejections of the claims raised in the Office Action dated August 30, 2006 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,



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